



## St. Patrick's Day STEM Light Up Shamrock

### Materials:

- Squishy Circuits
- Green play dough
- White or yellow modeling clay
- LED lights
- Images of Shamrocks

### Next Generation Science Standards:

- K-2-ETS1-1
- K-2 ETS1-2

### Visual Art Standards:

- VA: Cr 1.1.2
- VA: Cr 1.2.2
- VA: Cr 1.1.1

**Description:** During this festive St. Patrick's Day Activity Students will create their very own light up shamrocks. Students will explore the engineering design process as well as circuits and electrical engineering.

### Procedure:

1. First, spend some time researching shamrocks and their shapes as well as how circuits and electricity works.
2. Next, ask the students to explain to you verbally or with pictures how a circuit works.
3. After reviewing the safety rules around electricity and circuits, have the students start to create their shamrocks. Keeping in mind that the dough is conductive and the clay is insulating.
  - Students will need 3-4 balls of green play dough and one ball of clay. The clay should be in the middle of the 4 green balls.



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# Lesson Plan Activity

- Teacher tip: If you place the two ends of the circuit into the same piece of dough, the circuit will not complete, and the lights won't turn on. However, if you use the insulating dough, the lights won't turn on whatever you do. In the shamrock, the insulating dough in the center keeps the two sides of the shamrock apart and completes the circuit
- 4. Have the students ensure that all of the clay and dough is touching.
- 5. Next the students should place the LED lights in the green dough straddling the clay (one leg on each side).
- 6. After the lights are installed connect the positive side of the battery pack (red) to the same piece of dough where the long end of the LED light connects. Put the negative black wand into the piece of dough where the short side of the LED light is.
- 7. Turn on the squishy circuit.

